PHOTOTYPESETTER (Version 7)

Utility Program

(UNIX™ T)
DEC PDP-11/40,45

PHOTOTYPESETTER—VERSION 7 is a typesetting package which includes text formatting and mathematical equation processing. The PHOTOTYPESETTER's language has been designed to be easy to learn and easy to use by people who know neither mathematics nor typesetting.

The PHOTOTYPESETTER package includes three main programs:

TROFF is the basic formatting program. It drives a Wang Laboratories, Inc., C/A/T phototypesetter. It has formatting capabilities, such as line justification, hyphenation, etc. It also has programming capabilities, so very complex layouts can be done automatically. It allows users to define macros for common or difficult layout and formatting operations. Therefore, typists need know little about typesetting to do complex jobs.

EQN utilizes easy-to-learn commands that translate mathematics into the typesetting commands of TROFF, so math and text can be mixed. Most of the composition is automatic. Experience has shown that the language can be learned in an hour or so.

TBL does the same job for tables. So tables, math and text can be mixed.

Also included is a facility for simulating TROFF on other devices, such as line printers or teletypewriters.

Available from Bell Labs Computing Information Service, Murray Hill, N.J. 07974:

Documents for Use with Phototypesetter—Version Seven,
Bell Laboratories, May 1977. ($20)

NROFF/TROFF,
Computing Science Technical Report No. 4, Bell Laboratories, October 11, 1976.

Hardware requirements:
DEC PDP-11/40,45 (runs under the UNIX Time-Sharing Operating System)

Programming languages:
TROFF, EQN

License fee:
$3,300 (initial central processing unit)
$1,100 (each additional CPU)

For more information, contact the Technology Licensing Manager, AT&T, P.O. Box, 25000, Greensboro, North Carolina 27420
or call (919) 697-6530

DDS Utility Program

Honeywell
6000 and DPS8 Series

The Data Dictionary System (DDS) is a means of controlling and standardizing data definitions. This data documentation system provides for storing, updating, and distributing information about data. It is an active dictionary that provides direct linkage from the data description to the production use of that data. This system is available in both batch and on-line configurations.

A data dictionary is a powerful tool in standardizing and centralizing data descriptions. DDS was designed to become the logical repository for documentation of data and data usage information. As such, it is an invaluable aid in data planning. The system supports and enhances program development and maintenance. The Data Dictionary System allows an organization to inventory its data and manage this corporate resource more effectively.

All DDS programs are written in COBOL-74. The DBMS used is DMIV-DB IDS/II. The capabilities of the Data Dictionary System include:

1. A complete cross-reference is provided
   —from Program to Field
   —from File to Report with appropriate narrative information.
2. Data description consistency is automatically enforced. Redundancy checking is automatic.
3. Naming conventions are automatically enforced.
4. DDS supports both COBOL-68 and COBOL-74 COBOL Copy Library generation.
5. Extensive COBOL editing is provided throughout the system to assure ease and accuracy of use of data fields.
6. DDS supports IDS/II Schema/Subschema generation.
7. DDS has a comprehensive report set including change notification, impact of change query, and a complete dictionary listing.
8. Inquiry and updating are available optionally in the on-line mode.
9. Up to ten versions of a data entity can be maintained on the dictionary.

Batch—

The DDS uses ASCII files for input transactions to all programs accessing the IDS/II data base. All reports and library generation are produced in the batch mode.

On-line—

This option enhances the operation of the DDS by providing query and update functions using 19 possible screens. DMIV-TP is used as the transaction processor. Provides immediate verification that the update was successful or documents the reason why it failed.

Hardware requirements:
Honeywell 6000 Series:
GCOS release 4J or 4JS1
Honeywell DPS8 Series:
GCOS release 4JS2

Software requirements (available from Honeywell):
DMIV-DB (IDS/II)
COBOL-74 compiler
Q2UTIL multi-function utility
DMIV-TP On-line Transaction Processor (for on-line option)

License fees:

First data center	
—Batch version	$12,000
—Batch with On-line Option	$15,000
Subsequent data center	
—Batch version	$ 4,000
—Batch with On-line Option	$ 7,000

For more information, contact the Technology Licensing Manager, AT&T, P.O. Box, 25000, Greensboro, North Carolina 27420
or call (919) 697-6530

GCOS-QED Utility Program

Honeywell 600/6000

GCOS-QED is a powerful and flexible text editor for creating and modifying text from a time-sharing terminal. GCOS-QED is designed to run on the Honeywell 600/6000.

Key words and phrases: text editor, command language, time-sharing.

Designed to run on the Honeywell 600/6000, GCOS-QED is an interactive program which is used to create and modify text from a time-sharing terminal.

While there are many other text editors, GCOS-QED offers users several special features. It has a command structure that makes it particularly easy to use. GCOS-QED's syntax is concise and very regular. There are a number of commands which are one character long. Most command names are mnemonically related to their functions.

Unlike many text editors, GCOS-QED stores all the text it is working on in main memory. This arrangement gives the user rapid access to all the text, even if addressed randomly. (This arrangement does set limits on the amount of text that can be edited at one time. With a memory limit of 32K words, GCOS-QED can process 45- to 50-block files—or about 30 8-1/2"-by-11" pages of text.)

All text in GCOS-QED is stored in buffers. At any time there is a current buffer to which most commands implicitly refer. However, GCOS-QED also provides for the creation and manipulation of several buffers, which are often used for temporary storage of sets of lines as they are being copied or moved from one part of the text to another. Thus, normal editing can be done on individual lines in any one buffer, or buffers can be manipulated as units (much as an editor might cut, rearrange, and repaste an original text).

SEE ALSO: TSO-QED

Available from Bell Labs Computing Information Service, Murray Hill, N.J. 07974:

QED Text Editor, Computer Science Technical Report No. 5, Bell Laboratories, May 1972.

Hardware requirements: Honeywell 600/6000

Programming language:
Honeywell Assembly Language

License and patent fees:
$4,000 (first central processing unit)
2,000 (each additional CPU)

For more information, contact the Technology Licensing Manager, AT&T, P.O. Box, 25000, Greensboro, North Carolina 27420
or call (919) 697-6530

ROFF Utility Program

Honeywell 600/6000

ROFF is a publications formatting program that offers unusual freedom in document style.

Key words and phrases: publications formatter, text formatter.

ROFF is a publications formatting program. ROFF input consists of text lines containing the information to be formatted, and request lines containing instructions on formatting style. (The ROFF reference manual includes a table of the program's 65 requests which defines the text formatter's complete capability.) Input may be either a nine-bit (ASCII) or a six-bit (BCD) file.

ROFF output is a paginated, user-formatted document produced on a terminal or line printer. Output lines may be "filled" with words without regard to input lineation, or may be copied one-for-one from input text.

ROFF offers users unusual freedom in document style. For instance, computation of page numbers and line numbers is automatic; section numbers, equation numbers, and so on, may also be computed. A macro facility permits the creation of new commands from old ones.

The style of running titles and footnotes can be set independently of text style. Justification, indentation, centering, line length, line spacing, page layout, hyphenation at line breaks, and collecting of an index can all be controlled by the user.

Hardware requirements: Honeywell 600/6000

Programming language: BCPL

License fee:
$4,000 (per central processing unit)

For more information, contact the Technology Licensing Manager, AT&T, P.O. Box, 25000, Greensboro, North Carolina 27420
or call (919) 697-6530

DBBR-JCLG Utility Program

IMS/VS Systems

The Data Base Backup and Recovery-Job Control Language Generator (DBBR-JCLG) creates the JCL needed to perform utility functions on IMS Data Bases. It also creates the JCL needed to perform the "backout" function in a recovery situation.

While creating the JCL needed for routine backup and recovery of an IMS data base is not especially complex, the amount needed to support a large data base application can require a great deal of time to prepare. And revising this JCL whenever a major system change is implemented can be almost as time-consuming and error-prone as the original effort. DBBR-JCLG automates the generation of backup and recovery JCL. It accomplishes in minutes what could require many workdays of manual effort. It frees your Data Base Administrator and his staff for more productive work, and it virtually eliminates the potential for error in repetitive manual JCL preparation. DBBR-JCLG gets its input directly from the DBD or PSB control blocks of IMS. It can create JCL to handle:

- image copy
- restore
- unload
- reload
- backout

A special command is available to allow DBBR-JCLG to interact directly with the Data Base Recovery Control feature of IMS in generating restore JCL.

DBBR-JCLG can be used in either an on-line or batch mode. In on-line operation, the user initiates JCL generation from a TSO terminal and can either save the JCL for later use or submit it directly to the internal reader.

Hardware requirements:

Any computer which supports IMS/VS and MVS

Software requirements:

IMS/VS
MVS
OS/VS2 MVS TSO Command Package (for batch operation)

License fees:

First data center	$8,000
Subsequent data center	$8,000

For more information, contact the Technology Licensing Manager, AT&T, P.O. Box, 25000, Greensboro, North Carolina 27420 or call (919) 697-6530

Automatic Indexing Utility Program

IBM 360/370

The Automatic Indexing and Computer Based Dictionary System was developed as a tool to assist in the operation and dissemination of Technical Information.

Key words and phrases: technical information, computer based dictionary, technical terminology.

The Computer Based Dictionary has a vocabulary comprised of words used to define and describe the techniques, equipment, materials, scientific disciplines and theories used to manufacture communications equipment. Also included are terms that define and describe areas of business and economics vital to the management of a company. Numerous articles are indexed by a reference librarian. The computer sorts and matches the articles to the interests of each system user's profile in conjunction with the Dictionary. The system increases the efficiency of indexing, thus allowing for an expansion of a Technical Information Library. The programs are written in PL-I and COBOL for processing on an IBM 360/370.

Hardware requirements: IBM 360/370

Programming Languages: PL-I and COBOL

License fee:
$15,000 (first central processing unit)
5,000 (each additional CPU)

For more information, contact the Technology Licensing Manager, AT&T, P.O. Box, 25000, Greensboro, North Carolina 27420
or call (919) 697-6530

COMSUB Utility Program

IBM 360/370-OS

The Computer Output Microfilm Interface Subroutines (COMSUB) formats print image data for conversion to microfilm on a wide variety of computer output microfilm (COM) recorder hardware.

Key Words and Phrases: Device independent, alphanumeric, subroutine, post processor.

COMSUB is a package of device independent, alphanumeric COM formatting subroutines. It can be integrated into report programs, to produce a formatted input to a COM recorder; or, it can be used as a stand-alone post processor which accepts a print image data tape, and formats the data for input to a COM recorder.

To further enhance the usefulness of the system, COMSUB can format data for 16mm, 35mm, and 105mm COM applications in either mode of operation.

Applications include Accounting, Payroll, Personnel Records, and many other areas utilizing print image outputs.

The package is capable of formatting print image data tapes for the following recorders:

- Datagraphix 4360
- Datagraphix 4440
- Datagraphix 4500 Series
- Quantor 105
- Bell & Howell 3700
- Kodak KOM80, KOM90,
- 3M Beta COM 600, 700
- Information International FR 80

Hardware Requirements: IBM 360/370-OS

Programming Language: Assembler

License Fee: $7,500 (1st CPU)
$3,000 (each additional CPU)

For more information, contact the Technology Licensing Manager, AT&T, P.O. Box, 25000, Greensboro, North Carolina 27420
or call (919) 697-6530

DISKEX Utility Program IBM 370

The Direct Access Exerciser (DISKEX) program tests direct access volumes, devices and controllers, and provides performance measurements.

Key Words and Phrases: Direct access, records.

The DISKEX program provides controlled test exercises for direct access volumes, devices and controllers. Sets of records are written to one or several devices, on one or several channels concurrently, and then read back to verify their correctness.

These records may be written in various lengths and each is unique and identifiable by length, content and sequence. While the DISKEX program is designed for the purpose of provoking hardware failures in direct access devices and control units, it can also be used for performance measurement.

Hardware Requirements: IBM 370 compatible CPU; any supported DASD to be tested.

Programming Language: IBM Assembler

License Fee: $1,200 (per data center)

For more information, contact the Technology Licensing Manager, AT&T, P.O. Box, 25000, Greensboro, North Carolina 27420 or call (919) 697-6530

TSO-QED Utility Program

IBM 360/370

TSO-QED is a powerful and flexible text editor for creating and modifying text from a time-sharing terminal. TSO-QED is designed to run on the IBM 360/370.

Key words and phrases: text editor, command language, time-sharing.

Designed to run on the IBM 360/370, TSO-QED is an interactive program which is used to create and modify text from a time-sharing terminal.

While there are many other text editors, TSO-QED offers users several special features. It has a command structure that makes it particularly easy to use. TSO-QED's syntax is concise and very regular. There are a number of commands which are one character long. Most command names are mnemonically related to their functions.

Unlike many text editors, TSO-QED stores all the text it is working on in virtual memory. This arrangement gives the user rapid access to all the text, even if addressed randomly.

All text in TSO-QED is stored in buffers. At any time there is a current buffer to which most commands implicitly refer. However, TSO-QED also provides for the creation and manipulation of several buffers, which are often used for temporary storage of sets of lines as they are being copied or moved from one part of the text to another. Thus, normal editing can be done on individual lines in any one buffer, or buffers can be manipulated as units.

TSO-QED also features absolute line numbering and column addressing. The TSO-QED work space accommodates up to 800,000 characters.

SEE ALSO: GCOS-QED

Hardware requirements: IBM 360/370

Programming languages:
IBM Assembly and TSO

License and patent fees:
$4,500 (first central processing unit)
$2,200 (each additional CPU)

For more information, contact the Technology Licensing Manager, AT&T, P.O. Box, 25000, Greensboro, North Carolina 27420
or call (919) 697-6530